

NOVEMBER 2004

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The **FEMP MONTHLY UPDATE** is prepared expressly for the Department of Energy's Office of Federal Energy Management Programs (FEMP). The purpose of the **UPDATE** is to provide FEMP management staff with timely information on topics relevant to the program. This includes the status of pending Federal and state legislation and summaries of public and private sector energy-related activities. The FEMP MONTHLY UPDATE is prepared for

DOE BULLETIN BOARD

Short-Term Energy Outlook, Energy Information Administration (EIA), November 2004

Higher oil prices in the past month have caused projections for heating oil and propane prices. An increase in household heating oil expenditures for a typical Northeastern household will exceed the previous projection of 28 percent increase and instead average about 37 percent above last winter's levels, with average winter prices at \$1.88 per gallon. Propane-heated households will increase by 26 percent this winter, compared to a 22 percent increase forecasted last month. Natural gas households remain forecasted at 15 percent.

In the last three weeks, the spot price for crude oil at the West Texas Intermediate (WTI) has ranged from \$49 to over \$56 per barrel. The price for the fourth quarter is projected to be \$20 higher than in 2003 with a price of \$51 per barrel. WTI prices increased quickly due to production losses in the Gulf of Mexico which was affected by Hurricane Ivan. Gasoline pump prices have ranged from the upper \$1.80's to the low \$2.00's per gallon since the third week of June. High crude oil prices make any large reduction in price unlikely. The oil inventories of the U.S. and oil inventories remain relatively low compared to historical standards. World demand is expected to grow by 3.5 percent to 200,000 barrels per day.

Natural gas prices increased due to losses from the Gulf of Mexico by Hurricane Ivan. The average spot price at Henry Hub for October was \$6.54 per thousand cubic feet (mcf), with a 2005 average projection of \$6.33 mcf.

CONGRESSIONAL ACTIVITIES

CONGRESSIONAL SCHEDULE

Although the 108th Congress has not formally adjourned, activities dealing with energy and related issues, have been put on hold until the 109th Congress convenes in January.

STATUS OF PENDING AUTHORIZATION BILLS OF INTEREST TO FEMP

No new legislation of interest has been introduced during the past month.

Comprehensive Energy Legislation Pete Domenici (R/NM) said last week that enacting a comprehensive energy bill next year will be a priority for the Republicanled Congress. He indicated his plan to hold hearings early in the year and work with the Democrats to obtain their input.

FY 2005 APPROPRIATIONS

See Attachment A – Status of FY 2005 Appropriations

Omnibus Bill On November 20, the House and Senate approved the conference report (*H. Rpt. 108-792*), clearing the way for enactment of a major omnibus bill that includes nine of the 13 annual appropriations bills. Full details on funding provisions are just emerging for the \$388 billion bill. For example, an across-the-board cut of .083 percent is expected for all programs covered by the omnibus bill. Seven of the nine bills covered in the omnibus package are of interest to the *FEMP Monthly Update* readers include the following discretionary funding provisions:

- Agriculture, Rural Development, Food and Drug Administration, and Related Agencies – \$16.96 billion
- Commerce, Justice, State, and the Judiciary \$40 billion

WHAT'S NEW ON THE FEMP WEB SITE

FY 2005 FEMP Training Catalog and Resource Guide is available at

http://www.eere.energy.gov/femp/services/training_catalog.cfm. You may download the entire catalog or view specific courses online.

DID YOU KNOW?

Energy 2005, the annual energy workshop and conference will be held on August 14 – 17, 2005, in Long Beach, California. For more information, visit the FEMP website at http://www.energy2005.ee.doe.gov.

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• Energy and Water Development – \$28 billion

 Department of Energy's Renewable Energy Program - \$389 million and includes:

Departmental Energy Management - \$1.967 million

Biomass and Biofuels - \$82 million

Wind Power - \$40 million

Solar Energy - \$86 million

Hydrogen - \$95 million

Geothermal - \$26 million

Hydropower - \$5 million

Electricity Transmission and Distribution -\$121 million

- Interior and Related Agencies \$20 billion
 - > National Park Service Maintenance Backlog \$573 million

Department of Energy's Energy Efficiency and Renewable Energy Program - \$649.092 million

Federal Energy Management Program - \$18.4 million (preliminary funding level)

- Labor, Health and Human Services, and Education \$143.309 billion
- Transportation and Treasury \$25.8 billion
- Veterans Affairs, Housing and Urban Development and Independent Agencies \$93.5 billion
 - Major Construction Projects \$458.8 million
 - Minor Construction Projects \$230.8 million

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FEDERAL AGENCY ACTIVITIES

DEPARTMENT OF DEFENSE (DOD)

No news of interest to report.

DEPARTMENT OF ENERGY (DOE)

2004 Annual Energy Awards Presented On October 28 in Washington, DC, the Department of Energy recognized the energy and water saving accomplishments of Federal employees throughout the government. A total of 27 awards were presented to individual, teams, and organizations whose combined efforts resulted in a savings of \$39 million over the past year. Coordinated by the Department's Federal Energy Management Program, recipients were recognized in several categories, including energy efficiency/energy management, water conservation, energy security and reliability, mobility energy efficiency, Energy Showcase, ENERGY STAR®, among others. For more details on this year's award recipients and categories, go to http://www.eere.energy.gov/femp/services/awards_fewm2004.cfm.

DOE to install 1,000 MW solar power The U.S. Department of Energy (DOE) will support efforts to install a total of 1,000 MW of concentrating solar power over the next several years. These efforts, supported through a five-year cooperative agreement first proposed by the Western Governor's Association (WGA), DOE's Office of Energy Efficiency and Renewable Energy will provide \$90,000 for the first year along with expertise and technical information about CSP systems for the span of the agreement. The total estimated cost of the project is \$1,860,000, including DOE's contribution. WGA and the States of New Mexico, Arizona, Nevada, California, Utah, Texas, and Colorado, will provide a cost share in the amount of \$64,690, or 40 percent. (Source: U.S. Department of Energy, November 8, 2004)

Secretary Abraham Resigns On November 15, Secretary Abraham announced that he submitted his resignation to the President on November 14. He is the longest-serving Secretary in the history of the Department and will remain at DOE until his successor is confirmed. No one has been nominated to succeed Secretary Abraham.

Hydrogen Refueling Station Opens Shell has opened the first combined gasoline-hydrogen station in Washington, D.C., the first such station in North America. The General Motor's fuel cell vehicles (FCV) in the DOE Vehicle and Infrastructure Learning Demonstration and Validation Project will use the new hydrogen station to refuel. Both compressed and liquid hydrogen are available to the six-car FCV fleet. The first station to be deployed in a potential hydrogen corridor, running from Washington, D.C. to New York City, is a demonstration of hydrogen technology. On the pump's opening day, Secretary Abraham said, "Today's opening of the hydrogen refueling station is an important step forward as this Administration works toward energy independence and a cleaner environment. Projects like this one help prove that hydrogen and fuel cell technologies work, which will allow private industry to make a future commercialization decision."

DOE NATIONAL LABORATORY ACTIVITIES

No news of interest to report.

ENVIRONMENTAL PROTECTION AGENCY (EPA)

First Green Power Community Awarded The Greater Community of Moab, Utah, consisting of Moab, Castle Valley, Pack Creek Ranch and Spanish Valley, is sourcing four percent of the community's electricity from green power. The Moab Community is the first Green Power Community in the new classification of the Green Power Partnership for voluntary community commitment. Moab Mayor David Sakrison said, "This designation clearly symbolizes our community's commitment to both the development of renewable energy technologies and protecting our environment." Last year, the municipal government of Moab was recognized by

EPA and DOE with a Green Power Leadership Award for exemplary purchase of wind, a green power.

FEDERAL ENERGY REGULATORY COMMISSION (FERC)

No news of interest to report.

FEDERAL REAL PROPERTY COUNCIL

New Property Management Rules In February of this year, President Bush signed an executive order on Federal Real Property Management. The purpose of the order is to "promote the efficient and economical use of Federal real property resources in accordance with their value as national assets and in the best interests of the Nation." Following the issuance of the order, the Federal Real Property Council, which is composed of senior Federal Government officials, developed new guidelines to help agencies improve their real property and asset management scores under the President's Management Agenda. On October 27 the council issued the new guidelines, which require each Federal agency to conduct an inventory of assets, implement property maintenance plans, and dispose of properties that are no longer needed by the agencies. To review the executive order, go to http://www.whitehouse.gov/news/releases/2004/02/20040204-1.html.

GENERAL SERVICES ADMINISTRATION (GSA)

No news of interest to report.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

E85 Station Opens NASA's Johnson Space Center (JSC) campus in Houston, Texas, has opened their first E85 facility. Since installing the 1,000-gallon, on-site, fuel-dispensing unit, JSC requires employees to use E85 in the 25 flexible fuel vehicles in the GSA fleet when traveling within 50 miles of the campus. The addition of the fuel center places JSC in compliance with the *Energy Policy Act of 1992*, which requires the acquisition of alternative fuel vehicles (AFVs) for Federal fleets, and Presidential *Executive Order 13149*, which requires that Federal fleets reduce their petroleum use by 20 percent by 2005. JSC is the fifth NASA E85 center, and is the second facility in the state of Texas other than Department of Energy's ethanol center in Amarillo.

CENTRAL REGION

No news of interest to report.

MID-ATLANTIC REGION

No news of interest to report.

MIDWEST REGION

No news of interest to report.

NORTHEAST REGION

No news of interest to report.

SOUTHEAST REGION

No news of interest to report.

WESTERN REGION

No news of interest to report.

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STATE AND LOCAL GOVERNMENT ACTIVITIES

GENERAL ANNOUNCEMENTS

No news of interest to report.

CENTRAL REGION

Colorado voters approved a ballot initiative on November 4th that requires the state's largest utilities to draw on renewable energy for 10 percent of their power needs by 2015. The measure is the first voter-approved statewide renewable energy requirement in the United States, and represents a high level of public support for renewable energy. The measure also requires solar power to provide 4 percent of the renewable energy; half of the solar power must be located at customers' facilities. To encourage their customers to install solar power, the utilities must offer a rebate of \$2 per watt for systems up to 100 kilowatts in capacity, and must allow net metering. The initiative requires the Colorado Public Utilities Commission to initiate a rulemaking process before April 1st and have the new rules in place a year later. For additional information, visit http://www.environmentcolorado.org/envcoenergy.asp?id2=14740.

Kansas City, Missouri recently became one of only a few cities in the nation to mandate that new buildings be built to a state-of-the-art "green" standard, the Leadership in Energy and Environmental Design® (LEED) standard. The LEED Green Building Rating System™, developed by the United States Green Building Council (USGBC), is the only nationally recognized green building rating system. LEED evaluates the performance of buildings from a "whole building" perspective, over the course of a building's lifecycle, which provides a definitive standard for what constitutes a green building. The ordinance means new municipal buildings must include features such as natural lighting and heating, fresher air and rooftop gardens. The architectural standard can mean savings of millions of dollars in operating costs. "This puts Kansas City on another leading edge position as it relates to the environment and creating green buildings," said Councilman Jim Rowland, who sponsored the ordinance. The City Council passed the ordinance unanimously. Taryn Holowka, Communications Coordinator for the USGBC, said only about a dozen cities require a building to be certified to the LEED standard. (Source: *The Kansas City Star*, November 18, 2004)

MID-ATLANTIC REGION

Pennsylvania's Department of Environmental Protection (DEP) announced on November 5th its award of \$5 million to 34 advanced energy projects, marking the second round of funding for the state's Clean Energy Harvest initiative. The grants will go toward a wide range of projects, including a variety of biomass energy projects, four small wind turbines, a wind-driven composting facility, eight projects to install a variety of solar power systems, a solar-and wind-powered water pumping system, a solar-powered greenhouse with a corn-fired furnace, a solar desiccant heat pump, a green roof installation, a high-performance green school, a truck stop electrification system (which helps avoid unnecessary idling by trucks), and a microturbine fueled with methane recovered from the mouth of a coal mine. Details can be found at http://www.dep.state.pa.us/newsreleases/default.asp?ID=3188&varQueryType=Detail.

Pennsylvania's Senate Environmental Resources and Energy Committee took an important step toward ensuring that Pennsylvanians will join the citizens of a growing number of other states that require their electric utilities to use a small percentage of renewable energy resources. By unanimous vote, the committee amended and then approved the Alternative Energy Portfolio Standards Act (SB 1030). The amended bill reflects the work of Senators Edwin Erickson (R) and Mary Jo White (R), who chairs the Environmental Resources and Energy Committee, and others. The committee on bill SB 1030 calls for energy companies selling electricity in Pennsylvania to provide 12 percent of their power from renewable resources in 15 years. (Source: Renewable Energy Access, November 15, 2004)

MIDWEST REGION

The Illinois Coalition recently released a report entitled, "The Hydrogen Highway: Illinois' Path to a Sustainable Economy and Environment." It outlines a plan to establish the state as an international leader in the fuel cell industry by developing a corridor of hydrogen energy demonstration projects situated around Interstate 90. The highway spans the state between the Indiana and Wisconsin borders. The report says rapid development of such projects would stimulate the Illinois economy and protect its environment for years to come. To learn more, visit http://www.ilcoalition.org.

Bowling Green's four wind turbines will be the first of many in northwest Ohio if predictions at Ohio's first commercial wind power conference come true. Ohio is one of the nation's hottest markets for wind power. The first analysis in years of Ohio's wind patterns shows that northwest Ohio is one of the state's better areas for calm, consistent wind that can make such turbines viable, officials said this month. A report released in early November and mainly funded by the U.S. Department of Energy lists Ohio second only to California with regards to new job potential stimulated by the growing wind-energy sector. Written by the Renewable Energy Policy Project in Washington, the report claims wind power has the potential to create 11,688 full-time jobs in Ohio and add \$3.9 billion to the state's economy. Additional information can be found at http://www.eere.energy.gov/regions/midwest.

NORTHEAST REGION

The Town Council of Hull, Massachusetts, recently passed a proposal to install a second wind turbine in town. A 1.8-MW turbine has been ordered and is expected to be installed by summer 2005. The proposal passed with an almost unanimous vote. The new turbine will be erected on top of the town's landfill, which will give it added height. As of November 15, the 660 kW wind turbine had produced approximately 4.5 million kWh since it was first commissioned late in 2001. According to the utility, it is operating with a capacity factor of 26.2 percent. The

production from the turbine results in lower taxes for the town's residents because it reduces the amount of electricity the Municipal Light Board must purchase. For more information, visit http://www.hullwind.org.

Maine is looking to adopt a low-emission vehicle regulation similar to that of California that may be put into place in 2005. The rule calls for a significant reduction of greenhouse gases by 2010, and would require considerable numbers of hybrid electric vehicles and hydrogen fuel cell vehicles. The automakers insist that there is no way to reduce greenhouse gas emissions from vehicles, except to reduce the fuel they use. Therefore, automakers believe this should be a regulation based on fuel economy, not emissions reductions. For more information, visit http://www.eere.energy.gov/cleancities.

SOUTHEAST REGION

In a previously blighted and vacant three-block area of Midtown Atlanta, Georgia Institute of Technology has overcome barriers to reconnect the university and the midtown neighborhood by developing a strong urban campus. The project features wide, tree-lined sidewalks with benches and bicycle lanes, shops and restaurants, a hotel, on-street and garage parking, and public transportation. The project has helped create a visible technology corridor and energized a midtown renaissance. The Georgia Tech College of Management has earned a Silver LEED rating, an achievement in which the Southeast Regional Office assisted Georgia Tech. As a result of this LEED rating, Georgia Tech is now designing other new buildings to meet LEED criteria. Information can be found on the Urban Land Institute web site at http://www.uli.org/DK/uli_Awards_fst.html.

WESTERN REGION

The Idaho Public Utilities Commission accepted a 20-year sales agreement between Idaho Power and Montana-based Fossil Wind Gulch Park, LLC. Fossil Gulch intends to construct and maintain seven 1.5 MW wind turbines about 3.5 miles west of Hagerman. Idaho Power would purchase the power under the commission's established rates for *Public Utilities Regulatory Policies Act (PURPA)* projects. The commission ordered that the current *PURPA* rate of about 5.5 cents per kWh be adopted, even though the rate is soon expected to increase to about 6 cents. The full text of the commission's order, along with related documents, is available on the commission's Web site at http://www.puc.state.id.us.

People and organizations across the United States are increasingly interested in solar power, but California continues to lead the way in terms of large installations. WorldWater and Power Corporation recently marked the completion of a 1 MW installation at Cerro Coso Community College in Ridgecrest and a 268 kW water-pumping system on a citrus ranch in San Diego County. Projects currently planned for the Golden State include a 900 kW system atop the FedEx Corporation's hub at the Oakland International Airport, a 269 kW system to be installed in Cathedral City by Honeywell, and a 225 kW installation at a wastewater treatment facility in San Francisco. For additional information, visit http://www.eere.energy.gov/regions/western.

San Francisco has announced the adoption of a Green Building Ordinance, which requires that all new projects, including city-owned facilities and leaseholds, achieve a LEED Silver certification from the U.S. Green Building Council (USGBC). San Francisco's Green Building Ordinance will apply to all new city construction projects, renovations and building additions. San Francisco joins nine other cities that have adopted green building ordinances requiring LEED. (Source: U.S. Green Building Council, November 9, 2004)

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UTILITIES AND SUPPLIER ACTIVITIES

GENERAL ANNOUNCEMENTS

No news of interest to report.

CENTRAL (FORMERLY DENVER) REGION

Restructuring Activities

Oklahoma's renewable energy industry received a strong vote of confidence earlier this month as Public Service Company of Oklahoma (PSO) announced a plan to buy up to 250 megawatts of green power electricity beginning as early as December 2005. This announcement comes four months after PSO publicized plans for a 106.5 MW wind farm in Weatherford, Oklahoma. Bids for this project are due December 1, and the company hopes to have contracts signed by early March 2005. While PSO has been criticized in the past by renewable energy groups and environmental groups for being the state's only major electric company to use no green energy, PSO, with this most recent announcement, is on track to more than double the state's renewable portfolio with more than 350 megawatts of green generation. (Source: *The Daily Oklahoman*, November 2, 2004)

As of November 2, 53 percent of voters in Colorado supported a proposal that would require utilities to obtain more electricity from renewable energy. Supporters of Amendment 37 pitched the renewable energy proposal as a boost to both the environment and the economy, especially in rural areas. Opponents, led by Xcel Energy, Colorado's largest provider of electricity, have spent more than \$1 million to date to fight the initiative. The proposal would require utilities with as least 40,000 customers to produce three percent of their electricity by 2007, six percent by 2011, and 10 percent by 2015, and would apply to seven utilities in Colorado, including Xcel. (Source: *Colorado Daily*, November 2, 2004)

MID-ATLANTIC (FORMERLY PHILADELPHIA) REGION

Restructuring Activities

Governor Ed Rendell (D) of Pennsylvania recently approved the *Alternative Energy Portfolio Standards Act*. The *Act* will require that 18 percent of Pennsylvania's energy come from alternative sources, such as wind, solar, and waste coal, by the year 2020. The bill, which the Governor has 30 days to sign into law, will also cover geothermal energy, coal mine methane,

biomass, and fuel cells as alterative sources. It was passed on November 20 by the House and Senate. The *Act* was approved by a 161-35 margin. (Source: http://www.phillyburbs.com, November 23, 2004)

MIDWEST (FORMERLY CHICAGO) REGION

► Public Benefits

American Electric Power issued a request for proposals for renewable energy to help fulfill energy-supply requirements for its retail customers in Arkansas, Louisiana, Oklahoma, and Texas. The proposals are due December 1, 2004. AEP is seeking bids from renewable-energy providers that could place new generating facilities into service by December 31, 2005. Eligible generation technologies include wind, solar, biomass, hydroelectric, and geothermal. Information is available at http://www.aep.com/go/RenewablesRFP. (Source: Pressi.com, November 4, 2004).

Restructuring Activities

Wisconsin Power and Light, a subsidiary of Alliant Energy Corporation, announced that it received an order from the Federal Energy Regulatory Commission authorizing a \$12.2 million interim increase in the company's wholesale electric rates, effective January 1, 2005, and subject to refund. Final rates are expected to be determined by mid-2005. For more information, visit http://www.alliantenergy.com.

In Minnesota, Xcel Energy and CenterPoint Energy Minnegasco customers could see a rate increase over the winter months. The Minnesota Commerce Department estimates that a typical gas customer could pay about \$127 a month for fuel in November, up from \$96.30 last November. (Source: *DuluthNewsTribune.com*, October 31, 2004)

Laclede Gas Company customers in Missouri may see a significant rate hike this season if the Missouri Public Service Commission approves Laclede's request for a rate increase. An average residential customer could pay an estimated \$923 from November through March, compared with \$610 last winter. Laclede would like to raise its gas rate from 71.6 cents per therm to 82.9 cents per therm. Generally, Laclede does not profit from the price it charges for natural gas. It does, however, profit from a distribution charge, which accounts for about 25 percent of gas bills (this amount is not scheduled to increase). The request is scheduled for January. (Source: *St. Louis Post-Dispatch*, November 9, 2004)

NORTHEAST (FORMERLY BOSTON) REGION

► Public Benefits

Customer Choice continues to grow in Rhode Island, according to the latest report from Narragansett Electric Company. Customers electing to change suppliers jumped from 1,643 in June to 2,875 in September. The amount of load served by competitive suppliers also saw a significant increase during the same quarter, from 60.7 million KWh in July to more than 75 million kWh in September. (Source: *New Power Executive Biweekly*, November 15, 2004)

Restructuring Activities

New Yorkers who use natural gas to heat their homes will pay up to 15 percent more this winter, according to the state Public Service Commission. The price of natural gas, the PSC noted, is determined by national and international markets, and is not regulated by the state. To counter the higher costs, New Yorkers are urged to seal up areas around doors and windows, insulate attics, and find various other ways to make their homes more energy efficient. (Source: *Daily News*, New York, October 21, 2004)

SOUTHEAST (FORMERLY ATLANTA) REGION

No news of interest to report.

WESTERN (FORMERLY SEATTLE) REGION

▶ Public Benefits

In early November, a plan to add solar panels at the El Dorado Hills Wastewater treatment plant in California was approved. The 900-kW solar farm will consist of 35,200-square feet of solar panels. The system is designed to provide supplemental power amid projected statewide supply shortages, as well as offset the rising cost of electricity. Efforts to decrease energy costs are driven by the California Energy Commission's recent estimate of a four percent power escalation per year. (Source: *Mountain Democrat*, November 4, 2004)

The Sanitation Districts of Los Angeles County have declared November 1 to be "Antelope Valley Green Energy Day" with the commissioning of the first high efficiency fuel cell in California to be run on gas generated from a wastewater treatment plant.

According to Jim Stahl, Chief Engineer and General Manager of the Sanitation Districts of Los Angeles County, "Antelope Valley Green Energy Day celebrates innovative green energy solutions in wastewater management in the Antelope Valley." The Sanitation Districts provide environmentally sound and cost effective wastewater and solid waste management for over half the population of Los Angeles County. (Source: Business Wire, November 1, 2004)

The Nevada Public Utilities Commission approved a 4.9 percent natural gas rate increase sought by Sierra Pacific Power Company. For the average residential user, the increase that takes effect the beginning of November will cost an additional \$2.79 a month. Sierra Pacific sought the rate hike to pass along rising natural gas costs, with no profit to the company. The company sought the increase it is annual purchased gas adjustment filing, where utilities can raise or lower rates depending on the market. (Source: Las Vegas Sub, October 28, 2004)

Restructuring Activities

Electric rates would need to go up approximately 6 percent to meet the Sacramento Municipal Utility District's financial targets over the next three years, according to the district's draft 2005 budget. The \$1.26 million budget, to be discussed at public hearings starting in the middle of November, puts the first official number on an impending rate hike that has been a possibility since the summer. A six percent increase, if applied to all customers, would raise the average rate for 750 kWh to \$72.09 a month from \$68.01. Much of the increase comes from a steady increase in natural gas prices, while a smaller amount is due to the reduction in utility power from one its traditional sources of low-cost energy, the Federal Western Area Power Administration. Details will be provided during public hearings in January and February of 2005. (Source: *The Sacramento Bee*, November 8, 2004)

Pacific Power (Portland, Oregon) wants a 12.5 percent increase and has filed the request with the Oregon Public Utility Commission (PUC). If the PUC approves the \$102 million rate boost, customers would only see their rates rise about 7 percent, as the fuel surcharge for the 2001 energy crisis will expire the summer of 2005. The price increase would amount to about \$5 a month more for the average customer and would begin September 2005. (Source: Oregon Public Broadcasting, November 15, 2004)

Negotiations are underway for a \$120 million deal to build 63 huge wind turbines on the hills overlooking the Columbia River west of Arlington, Oregon. The proposed 104-megawatt project would be the closest wind farm yet to the Columbia River, according to Chris Crowley, President of Columbia Energy Partners. PacifiCorp is looking for partners in this endeavor, and there are currently 15 frontrunners hoping for a wind power deal. PacifiCorp hopes to make a decision on its partnership commitment by the end of the year. (Source: *The Columbian*, November 11, 2004)

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PRIVATE SECTOR

GENERAL ANNOUNCEMENTS

No news of interest to report.

CENTRAL REGION

The Dallas - Fort Worth Airport in Texas, is offsetting energy costs with a new 6-million gallon storage tank. The thermal storage tank chills air conditioner coolant in the middle of the night, when energy is cheapest, and uses the coolant during the day, when energy is more expensive. Regulating the timing of the chiller has reduced cooling costs by 91 percent during periods of peak electrical demand. "This saves real money while we use fewer resources and pollute less," said Jim Crites, Executive Vice President of Operations at the airport. (Source: Associated Press, October 25, 2004)

The new Boulder Community Hospital's Foothills Campus in Boulder, Colorado, is the first hospital to receive LEED (Leadership in Energy and Environmental Design) certification from the U.S. Green Building Council. The 154,000-square foot hospital and 67,000-square foot outpatient services building are the first stage in a campus that will eventually cover 400,000 square feet. Open space, including a creek floodplain and a prairie dog colony, was maintained in 32 of the 49 acres. The hospital has operated an environmental impact program for some time and is a member of Hospitals for a Healthy Environment (H2E). The campus was designed to obtain a Silver LEED rating, featuring materials with low volatile organic compounds (VOC), materials that are locally harvested, materials with recycled contents or rapidly renewable content and energy and resource efficiency and sustainable business practices. The energy efficiency products used included building shading devices, occupancy sensors, high-efficiency glazing, and T5 lamps. Part of the power supply is obtained through wind power purchase. (Source: *Interior & Sources*, October 2004)

MID-ATLANTIC REGION

The University of Richmond's Weinstein Hall is one of four buildings in Virginia to have earned LEED certification. The building was expanded to 53,000 square feet and renovated with many environmental friendly features including a system that monitors and adjusts fresh air entering the building and carpeting and paint selected for low volatile organic compounds. The parking area has plug-ins for rechargeable motors and spaces designated for carpools and alternative fuel vehicles. Andrew McBride, university architect, said "LEED certification is a great honor because it proves that the building is sustainable." (Source: *Richmond Times*, October 1, 2004)

Old Dominion University (ODU) in Virginia is on the path towards a "wholly green campus." ODU's new Engineering and Computational Science Building recently received certification from the U.S. Green Building Council. The \$19.3 million project has rain gardens, showers and lockers for bike-riding commuters, recycled carpeting and concrete, indoor airpollution monitors, and motion detectors that automatically turn lights off and on depending on whether offices are empty or occupied. The main feature are aluminum blinds which jut from the outside of the building in order to allow natural light in offices while still shading them. (Source: *The Virginian-Pilot*, September 25, 2004)

MIDWEST REGION

The Illinois Clean Energy Community Foundation has given the Illinois Coalition a \$53,558 grant to build a hydrogen fuel cell combined heat and power (CHP) plant at the Greater Rockford Airport Authority. The CHP plant will be powered by solar and wind technologies. Rockford Airport Director Bob O'Brien said, "I'm excited that we'll be the first airport in the world to demonstrate that renewable solar and wind energies can be successfully integrated into the transportation sector." The project qualifications include establishing hydrogen at the plant to fuel airport vehicles and establishing stationery heat and power to the fire station. For more information on the request for qualifications, contact Mr. Christopher Tynan, Illinois Coalition, at Tynan@tskenergy.com or 312-229-1970 x 107.

Another project partially funded through Illinois Clean Energy Community was completed this September at the Mater Dei High School in Illinois. With help from the \$225,000 grant, Mater Dei unveiled a new energy efficient, 22,750-square foot building addition. The new addition, which includes a fine-arts facility, gymnasium and training room, features a geothermal heating and cooling system. A highly reflective roof allows for day light instead of artificial lighting wherever possible. The U.S. Green Building Council recognized the building with a silver rating for leadership in energy and environmental design. (*Belleville News Democrat*, October 1, 2004)

Bolingbrook High School, Illinois, is poised to earn certification from the U.S. Green Building Council. The new school opened this fall to reveal classrooms with 90 percent of space offering natural light and outdoor views, corridors with solar sensors to dim lights and save 25 to 30 percent in energy consumption, and laboratories and restrooms with water collection and condensation devices to save 360,000 gallons of water per year. Runoff in the parking lot is minimized by the native plants that filter out salt and oils. The new school was funded through a \$143 million bond approved by voters in 2002; however green features added minimal additional cost to the project total of \$100 million. (Source: *Chicago Sun Times*, October 27, 2004; *Chicago Tribune*, September 1, 2004)

The Heartland Community College's workforce development center in Normal, Illinois, will be the first green building in Illinois that is state-funded and built by the state's Capital Development Board. Last year, Governor Rod Blagojevich (R) approved plans to begin the center's construction. "Although there are a few LEED-certified buildings in Illinois, this will be the first one funded by state dollars and built by CDB [the state's Capital Development Board]," stated Anthony Rossi, the board's Executive Director. Heartland will cover 25 percent of expenses while the state accounts for the rest, including the LEED certification costs. The 101,500-square foot building costs \$19 million with \$1.1 million for green features. Jon Astroth, President of Heartland, said energy savings will recover extra costs in the long run. The center will be completed in April 2006. (Source: *The Pantagraph*, September 1, 2004)

NORTHEAST REGION

The Trustees of Reservations, a 113-year old conservation group in Massachusetts, have built an environmentally sustainable new office and conference space in the 50-acre Doyle Reservation. The new Doyle Conservation Center is a \$5 million, 18,000 square foot building that anticipates a gold rating from the U.S. Green Building Council. Andrew Kendall. Executive Director of the trustees, explains, "We thought it was critically important to stand as an expression of the Trustees' mission and to espouse our values." Photovoltaic panels, funded by a grant from the Massachusetts Technology Collaborative, provide solar power for 25 percent of the Center's electricity. Two geothermal wells, extending to 1,500 feet below ground, draw on the Earth's temperature for natural heating and cooling. An energy-recovery ventilator removes heat from exhaust air and adds it to the building's intake air. Many superinsulated windows work with a central computer to keep building temperature regulated. Additional features include low flow toilets at three ounces per flush and a network of retention ponds or bioswales surrounding the exterior. Dave Decker of Wayne Woodworks said, "Green elements added about 15 percent to the construction costs of the Doyle Conservation Center. While the initial costs of installing a geothermal heating and cooling system were greater than the cost of installing a typical air-to-air heat pump system, the anticipated savings from annual utility costs will result in payback in less than six years." (Source: The Boston Globe, October 1, 2004)

NRG Systems, manufacturer of wind assessment systems, has opened a new 46,000-square foot facility powered mostly by renewable energy in Hinesburg, Vermont. A 67-kW solar photovoltaic installation powers two-thirds of the building. The remaining electricity comes from another renewable resource, wood pellets made from lumber milling waste, for its heating needs. The inside of the facility features water-saving devices such as dual flushing toilets and faucet aerators, ENERGY STAR ® rated office equipment, and dozens of skylights for natural light. Jan Blittersdorf, President and CEO of NRG Systems, Inc. said, "We also wanted to create a workplace that was healthy, functional and beautiful for our employees, while supporting our company's mission of furthering the use of renewable energy." NRG found the cost of building sustainably was 8.21 percent more at \$13.81 per square foot; however the additional costs will pay for themselves within five years. The facility is seeking gold level LEED certification. (Source: *GreenBiz.com*, October 27, 2004)

SOUTHEAST REGION

The University of South Carolina (USC) has opened the largest residence-hall complex of its kind in the world. The new 172,000 square foot complex consists of three four-story buildings constructed with environmental features for energy and water conservation. The complex holds an outdoor amphitheater, a learning center powered partially by a five-kW hydrogen fuel cell and a turf roof. The interior uses cement blocks, a copper roof, and recycled

materials. The residence hall, West Quad, uses water preheated by solar collection and use of high efficiency windows. West Quad uses 45 percent less energy and 20 percent less water than similar traditional residence halls. The entire project cost \$30.9 million, the same cost as building without green features. USC is waiting for LEED certification from the U.S. Green Business Council. Only two other universities, Carnegie Mellon and Duke University, have received LEED certification for residence hall design. (Source: *GreenBiz.Com*, November 9, 2004)

The Bernheim Arboretum and Research Forest's new visitor center, reaching completion this December in Tennessee, is trying for a platinum rating from the U.S. Green Building Business Council. The \$3.5 million building's exterior was constructed from cypress recycled from old pickle vats. Vine covered trellises lessen the transition from the building to the 14,000 acre forest in Bullit and Nelson counties. "We're trying to create a nonbuilding," said Architect Lee Bagley. "We wanted a place that people can pass through and into the natural world." The energy efficient building has 20- and 24-foot ceilings and walls dominated by windows. Summer light is absorbed by the vegetation-covered roof while in winter the lower sun penetrates the windows. A geothermal heat and cooling system, which uses 12 wells to send water 300 feet into the ground, regulates the building's temperature for all seasons. A peat system cleans sewage and returns water to the ground. (Source: *The Courier-Journal*, October 1, 2004)

WESTERN REGION

The Los Angles International Airport (LAX), California, has chosen a fuel cell powered vehicle to operate in conjunction with the newly opened public hydrogen fueling station. DaimlerChrysler modeled the F-Cell after a Mercedes Benz A-Class. The fuel cell vehicle has a range of approximately 100 miles and a maximum speed of 85 mph. DaimlerChrysler will be providing LAX with 59 additional F-Cells. The LAX fleet will hold eventually 60 F-cells, and three medium duty fuel cell Dodge Sprinter vans and 33 Mercedes-Benz Citaro fuel cell buses. BP and Praxair installed the hydrogen pump at LAX in coordination with the F-Cell to further the development of the fuel cell and hydrogen infrastructure, under the California Hydrogen Highway program established by Governor Schwarzenegger (R). (Source: Clean Edge News, October 25, 2004)

The American Institute of Architect's interior space in Hawaii is the first commercial to earn the U.S. Green Building Council's silver rating. The 1,876 square foot office within the historic Stangenwald Building features windows that open and the use of carpeting, paint and finishing with low volatile organic compounds. About 70 percent of anything removed from the building was recycled including sheetrock walls that were turned into compost. Joe Ferraro, the architect for the project, said green offices save money on electricity and provide a healthier workplace that reduces employees' sick days. The \$100,000 project was accomplished after four months of work by architects, contractors, and suppliers. The silver certification provides a state-wide model for green building standards. (Source: *Honolulu Writer*, September 1, 2004)

In Colfax, California, Hills Flat Lumber Company has installed a 145-kW solar electric rooftop system. Prior to installation, Hills Flat assessed their energy needs through an energy audit. As a result, they determined the size of the solar system to meet approximately 92 percent of the store's electricity needs. A Fat Spaniel Technologies' PV2Web™ monitors the system and includes a kiosk in the store displaying the system's real-time energy data. Installing a renewable energy system adds to the store owners' commitment to reduce energy consumption by offering green building materials and stocking energy saving products. Felix Electric, an electrical contracting firm, fully financed the system and RWE SCHOTT Solar

Incorporated, a manufacturer and distributor of solar systems, installed the system. (Source: *SolarBuzz.Com*, November 12, 2004)

A large tract finish contractor, Trimco Finish of Santa Ana, Orange County, California, has installed a new 178-kW array on top of the 50,000 square foot building. Solar Electrical Systems outfitted the monolithic fiberglass low-slope roof with a non-penetrating system that met Santa Ana's structural weight, adhesion, and wind loading requirements. The \$225,000 project is anticipated to save \$6,000 per month on Trimco's electric bill. (Source: SolarBuzz.com, October 22, 2004)

SolarMission Technologies Incorporated of Thousand Oaks, California, will build, own, maintain, and operate 2,600 MW of solar towers. Solar towers, created by SolarMission, use solar radiation to heat air beneath a large translucent collector to create a constant flow of heated air to drive electricity-generating turbines. One unit is able to produce 200 MW and is effective on large scales, without emissions. (Source: *Business Wire*, November 2, 2004; http://www.solarmissiontechnologies.com)

Santa Barbara County Federal Credit Union will be the first credit union in California to have a rooftop solar electric building. In conjunction with the announcement, the Credit Union announced the No-Hassle Solar Power Loan; a new solar loan program designed to encourage members to invest in solar projects. REC Solar will finish installation of the 38-kW system this month. The solar array will generate approximately 60 percent of the Credit Union's power requirements. The array will pay for itself within 15 years and will provide the business a 7 percent return on their investment. "The Credit Union leaders are really walking their talk with their solar electric system purchase," said REC Solar District Manager Michael Lind. (Source: RenewableEnergyAccess.com, October 27, 2004)

Portland State University's (PSU) newest residence hall will be decked with a 15,200 square foot ecoroof, or green roof. The roof is designed to manage stormwater and ease the city's sewer system which must process an average 36 inches of rain per year. An ecoroof can be more effective than a conventional detention pond, especially in urban areas where impervious surfaces divert water to the sewer instead of the environment. An ecoroof will divert up to 100 percent of rainwater from the sewer system. Additionally, the ecoroof will provide an insulation cover, reduce ambient air temperature and offer habitat for birds and insects. "A green roof turns out to be a really interesting thing. Not only does it reuse the water coming out of the sky, it creates an insulating cover over a building," said Jan Kurtz, executive director of the PSU Foundation. "Also, it's cheaper to operate over the life of the building if you build it right." (Source: *Business Journal*, September 1, 2004)

De Anaza Community College of the San Francisco Bay area, California, has replaced their science center with a LEED-certified sustainable building. The three buildings that comprise the 46,000 square foot complex surround a central courtyard where students can study on the grass or concrete benches. The building features heating, ventilation, and electrical systems under false floors, an abundance of natural light, and the use of renewable or sustainable materials such as bamboo on the walls and crushed sunflower seeds on the countertops. The science center project was funded by Measure E bond funds, voted for by the De Anza district voters in 1999. (Source: *The Mercury News*, October 1, 2004)

Century21-Ditton Realty and Renewable Technologies and Renewable Technologies, Inc. will provide SolarStar™ solar electric systems to homes constructed in the Meadow Springs Ranch Estates development in Coarsegold, California. Meadow Springs Ranch offers solar energy and recycled "gray water" to create an environmentally friendly development.

Lot owners may choose a roof-top or ground mounted SolarStar[™] system which is comprised of Shell photovoltaic panels and Sunnyboy inverters. The solar system operates similar to netmetering by generating electricity for the Pacific Gas & Electric (PG&E) electrical grid during the day, and drawing from the grid at night. At the end of the year, PG&E reconciles the power bill for an annual amount that should be close to zero. State of California rebate funds are available to all SolarStar[™] homeowners through the California Energy Commission for a total of \$946,000 for 236.5-kW of solar power; additional tax options are also available. (Source: SolarBuzz.com, November 9, 2004)

GenSelf Corporation has installed a 113-kW solar carport at the Edward Mansion Banquet facility in Redlands, California. The grid-connected unit will provide 190,000-kWh per year or 80 percent of the property's electricity needs, resulting in an annual electricity bill savings of approximately \$24,000. A rebate providing for about half the total project cost was issued by California Public Utilities Commission's Self Generative Incentive Program. The program was established to encourage the use of solar power by reducing net costs to \$0.24 on the dollar. (Source: *PR Newswire*, November 4, 2004)

Sierra Nevada Brewing Company in Chico, California, has taken advantage of the California Public Utilities Commission \$2.50 per watt incentive and installed fuel cells. FuelCell Energy delivered four 250-kW units sized to accommodate 300-kW of output. The project's cost is covered up to 40 percent by the incentive. Alliance Power acts as a turnkey provider purchasing the fuel cells and overseeing the installation until Sierra Nevada buys the fuel cells. Sierra Nevada will not remove itself from the PG&E grid, but will instead buy power from Alliance. In the future Sierra Nevada hopes to operate the fuel cells using wastewater, spent grain, and yeast. (Source: *DE*, September/October 2004)

INTERNATIONAL

CH2M Hill Canada is purchasing Wind Power Certificates™ to power more than 500 computers and laptops across Canada. "By purchasing Wind Power Certificates™ for our company's computer, our employees learn about the benefits of investing in alternative energy at work and are inspired to extend this to their own home computer use," said Ann Duffy, Vice President of Sustainable Development for CH2M HILL. The company is participating in Pembina Institute's 20,000 Computers Campaign which encourages businesses and individual to support renewable energy and clean energy initiatives through purchase of certificates. Profits from the sale of the certificates offset the cost of wind power generation. The resulting power is sold generically to the power grid. (Source: *Canada Newswire*, November 8, 2004)

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MEETINGS, CONFERENCES, AND TRAINING WORKSHOPS

- ➤ Refer to <u>Appendix B</u> New Technologies
- ➤ Refer to Appendix C Calendar of Upcoming Events

GENERAL ANNOUNCEMENTS

The Association of Energy Engineers is offering six online seminars: 1) Distributed Generation Short Courses, Course 2: Fuel Cells on January 7, 2) 3D Load Profiling Using Interval Meter Data on January 10, 3) HVAC Controls Short Courses on January 10, 4) Energy Auditing Fundamentals on January 12, 5) Pitfalls and Profits in Performance Contracting on January 18, and 6) Facilities Management: Essentials and Critical Strategies for Success on January 18. The Distributed Generation Short Courses, Course 2: Fuel Cells, covers commercial, industrial, and institutional fuel cell technologies. The course will cover the basics on fuel cells, different types of fuel cells, and required developmental programs. The 3D Load Profiling Using Interval Meter Data course covers energy data analysis, techniques for using interval metering and other sources, and advanced analytical techniques using Microsoft© Excel spreadsheet. The HVAC Controls Short Courses, Course 1: Introduction to HVAC Controls covers HVAC design process and basic HVAC sequences for control system design. The HVAC Controls Short Courses, Course 2: Advanced HVAC Control Strategies covers DDC control strategies that save energy, improve comfort, and extend the life of the equipment. The Energy Auditing Fundamentals course covers pre-audit work, site visit phases of the audit, analysis of audit data, and strategies to identify potential energy and economic savings. The Pitfalls and Profits in Performance Contracting course covers strategies to identify and avoid cost mistakes from customers and energy service companies (ESCOs). methodologies for engineers to adapt a critical role in the performance contracting industry, and services and presentations for ESCOs in re-engineering. The Facilities Management: Essentials and Critical Strategies for Success course covers fundamentals of electricity, capitalintensive plant equipment, costs of energy, preventive maintenance of mechanical and electrical equipment, mean time between failures (MTBF) on HVAC and other plant equipment, and maintenance troubleshooting and problem solving. For more information, go to http://www.aeecenter.org/training or http://www.aeecenter.org/realtime.

CENTRAL REGION

The American Chemistry Council, Global Energy Partners, LLC and EPRI, Louisiana Department of Natural Resources, Sempra Energy Solutions, Spirax Sarco, Inc., Texas State Energy Conservation Office, and the Department of Energy are sponsoring The International Energy Technology Conference in New Orleans, Louisiana, on May 10-13, 2005. The conference consists of panel discussions, technical sessions, and an awards luncheon. The luncheon will honor companies, organizations, and individual achievements in energy efficiency. For more information, visit http://www-esl.tamu.edu/ietc/index.htm.

Rocky Mountain Electrical League is holding the Spring Electric Energy Conference in Albuquerque, New Mexico, on May 15-17, 2005. The conference covers electrical energy educational presentations and provides networking opportunities for operation and management personnel. For more information, visit http://www.rmel.org.

PPM Energy, Vestas America, American Corn Growers Foundation, American Corn Growers Association, Renewable Energy Systems, EnXco, Milbank, Alliant Energy, and MA Mortenson Company are sponsoring Windpower 2005 Conference and Expo in Denver, Colorado, on May 15-18, 2005. The conference will cover policy, technical, and business tracks on a variety of topics including utility issues, renewable energy policies, resource assessment and forecasting, emerging applications, and wind energy for farms. For more information, visit http://www.awea.org/wp05.html.

MID-ATLANTIC REGION

The American Council on Renewable Energy (ACORE) is holding the 3rd Annual National Policy Conference of the American Council On Renewable Energy in conjunction with the Energy Efficiency and Renewable Energy Caucus of the U.S. Congress in Washington, D.C., on December 6-7. The event will cover topics on financial and societal national energy challenges, renewable energy technologies and deployment, national security, and global climate change. For more information, visit http://www.acore.org.

The Association of Energy Engineers, Select Energy, NYSERDA, New Jersey's Clean Energy Program and others are sponsoring Globalcon 2005 in Atlantic City, New Jersey, on March 23-24, 2005. The conference will cover topics on HVAC and building systems, lighting efficiency, combined heat and power, distributed generation, and plant and facilities management. For more information, visit http://www.globalconevent.com.

The National Hydrogen Association (NHA) is holding the NHA Annual Hydrogen Conference in Washington, D.C., on March 29-April 1, 2005. The conference consists of six tracks including production and delivery research and development; storage research and development and deployment; analysis, safety, codes, and standards; demonstrations/initiatives; and Department of Defense hydrogen fuel cell initiatives. For more information, visit http://www.hydrogenconference.org.

MIDWEST REGION

lowa's Electric Cooperatives and lowa Energy Center are sponsoring a conference, Momentum is Building 2005 in Des Moines, lowa, on February 2-3, 2005. The conference will cover topics on HVAC systems, energy efficient products, 2005 National Code, energy efficient home design, energy efficient window and glass performance, and energy-efficient landscaping. For more information, visit http://www.momentumisbuilding.com.

NORTHEAST REGION

Northeast Sustainable Energy Association is sponsoring a conference, Building Energy 2005: The Practice of Sustainability: Art, Science, Business! in Boston, Massachusetts on March 15-17, 2005. The conference will cover green building design and clean energy generation. For more information, visit http://www.nesea.org/buildings/be/05index.

The TFM Group and the U.S. Green Building Council are sponsoring The TFM Show in Chicago, Illinois, on April 20-22, 2005. The conference will include an introduction to the green movement, an outline of LEED Certifications, and a section showcasing exhibitors' green products and services. For more information, visit http://www.tfmshow.com.

New York State Energy Research and Development Authority and Portland Energy Conservation Inc. are sponsoring the 13th National Conference on Building

Commissioning in New York on May 4-6, 2005. The conference will promote building commissioning as a method to improve the quality, efficiency, and performance of commercial buildings. For more information, visit http://www.peci.org/ncbc.

SOUTHEAST REGION

Delphi Inc., Grupo Decosi S.A. de C.V., Specifications Consultants in Independent Practice, Building Green Inc., BNP Media, ESRI, Pella Windows & Doors, and Spiderweb Inc. are sponsoring Ecobuild America in Orlando, Florida, on June 20-23, 2005. The conference will address the \$15 billion worth of green buildings currently in design or under construction in the U.S. For more information, visit http://www.ecobuildamerica.com.

WESTERN REGION

No news of interest to report.

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STUDIES, REPORTS, AND ANALYSES

ENERGY AND WATER CONSERVATION

Online Guide to Energy-Efficient Commercial Equipment, American Council for an Energy-Efficient Economy (ACEEE), November 2004

ACEEE has launched this online guide in order to assist businesses reduce costs and make wise cost decisions by reducing consumption through efficiency. The guide addresses three key areas in commercial buildings: lighting; heating, air conditioning, and ventilating systems (HVAC); and energy efficient motors. Lighting accounts for more than 40 percent of commercial sector electricity consumption in the United States, but best practices can halve that amount. HVAC systems have improved and are specialized for the building size. Energy-efficient motor selection is easier due to new programs to certify premium motor performance. The guide is available at http://aceee.org/buildings/coml_equp/index.htm.

SOLAR AND RENEWABLE ENERGY

Geothermal (Ground-Source) Heat Pumps, A World Overview, Geo-Heat Center and others, September 2004

This article provides an overview on geothermal heat pumps (GHP). The requirements for installation and developing a project are examined and discussed through global case studies. GHP have increased annually by 10 percent in about 30 countries over the past 10 years. Approximately 1.1 million GHP installations are located throughout the world, mainly in the United States and Canada, The renewable energy used by GHP worldwide is about 20,000 GWh. The report is available at http://geoheat.oit.edu/bulletin/bull25-3/art1.pdf.

The Ocean Energy Report - Edition 1 2003, ABS Energy Research, 2004

There is great potential for ocean energy to become a mainstream renewable energy resource. Ocean energy is utilized on a small scale through four technologies: tidal energy, wave energy, ocean thermal energy conversion (OTEC), and marine current energy. The report outlines the technologies and the status of each technology and its respective industry. Public and governmental sectors are using ocean energy for local to large scale projects. There is a need to transfer offshore industry knowledge to the growing ocean energy industry. This report is available for purchase from http://www.researchandmarkets.com, report "39136."

MISCELLANEOUS

Energy Storage Technologies for Electric Power Applications Report, Research Reports International (formerly Energy Info Source), November 2004

This second edition report takes a comprehensive look on the benefits of energy storage, energy storage applications, and energy storage technologies. The report includes a comparison of major energy-storage technologies and profiles of energy-storage manufacturers. The 80-page report is available for purchase from http://www.researchreportsintl.com/products/product.cfm?report_ID=55.

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APPENDIX A STATUS OF FY 2005 APPROPRIATIONS BILLS Red text highlights developments since the last issue of *INSIGHTS*.

(In Billions)

HOUSE

SENATE

| Jurisdiction/ FY 2004 Budget Request (In Billions) | 302(b) Discretionary Allocations/ Approved Funding Level (In Billions) | Bill No. | Full Cmte. Mark Up | Floor Vote | Vote on Conf Rpt. | 302(b) Discretionary Allocations/ Approved Funding Level (In Billions) | Bill No | Full Cmte. Mark Up | Floor Vote | Vote on Conf. Rpt. |
|--|--|--------------|-----------------------------|---------------|----------------------------|--|---------|-----------------------------|---------------|-----------------------------|
| Agriculture \$16.569 *** | \$16.78 \$16.77 | H.R. 4766 | 6/23 | 7/13 | 11/20 | TBD \$16.77 | S. 2803 | 9/14 | | 11/20 |
| Commerce \$39.553 *** | \$39.78 \$39.8 | H.R. 4754 | 6/23 | 7/8 | 11/20 | TBD \$39.7 | S. 2809 | 9/15 | | 11/20 |
| Defense \$392.585 P.L. 108-287 \$416.2 | \$392.14 \$416.9 | H.R. 4613 | 6/16 | 6/22 | - | TBD \$416.2 | S. 2559 | 6/22 | 6/24 | 7/22 |
| Energy and Water Development \$27.938 *** | \$27.99 \$28.0 | H.R. 4614 | 6/16 | 6/25 | 11/20 | TBD | | | | 11/20 |
| Homeland Security P.L. 108-334 \$32 Billion | \$32 \$32 | H.R. 4567 | 6/9 | 6/18 | 10/9 | TBD \$32 | S. 2537 | 6/17 | 9/14 | 10/11 |
| Interior \$19.982 *** | \$19.73 \$19.5 | H.R. 4568 | 6/9 | 6/17 | 11/20 | TBD \$20.256 | S. 2804 | 9/14 | | 11/20 |
| Labor/HHS \$142.050 *** | \$142.05 \$142.324 | H.R. 5006 | 7/14 | 9/9 | 11/20 | TBD \$142.317 | S. 2810 | 9/15 | | 11/20 |
| Military Construction P.L. 108-324 \$10.003 | \$9.553 \$10.003 | H.R. 4837 | 7/9 | 7/22 | 10/9 | TBD \$10.003 | S. 2674 | 7/15 | 9/20 | 10/11 |
| Transportation and Treasury \$25.714 *** | | H.R. 5025 | 9/8 | 9/22 | 11/20 | TBD \$44.052 | S. 2806 | 9/14 | | 11/20 |
| VA/HUD \$92.129 *** | \$92.129 \$92.9 | H.R 5041 | 7/22 | | 11/20 | TBD \$92.930 | S. 2825 | 9/21 | | 11/20 |

^{***} Bills are included in the Omnibus Appropriations package.

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APPENDIX B – NEW TECHNOLOGIES

For informational purposes only. Listing does not imply endorsement.

| TECHNOLOGY | Manufacturer | Manufacturers Claim | Contact |
|--|------------------------------|--|---|
| | | HVAC | |
| Conquest 90 Max | Comfort-Aire | High-efficiency, two-stage gas furnace. Features five models from 75,000 to 120,000 Btuh. Adjusts flow of gas to the furnace for maximum fuel efficiency and comfort. Provides most efficient air-gas mixture. | http://www.comfort-aire.com |
| Powermax Refrigerant Recovery System | Refco Manufacturing Ltd. | System subcools, self-evacuates, and recharges. Engineered as a compatible add-on module for refrigerant recovery system. Separates water, oil, and acid out of refrigerant. | http://www.thermaflo.cc |
| Super Seal ACR [™] | Cliplight Manufacturing Co., | Designed to seal leaks in condensers, evaporators, and lines caused by formicary and internal acid corrosion, vibration, and temperature variation. | http://www.cliplight.com |
| | | LIGHTING | |
| Plug-In HID Ignitor Assemblies | Advance | Range of innovative new square plug-in ignitor assemblies. Assemblies help to simplify the lighting maintenance process and to test, and replace ignitors in magnetic HID luminaries. | http://www.advancetransformer .com |
| Ballastic Series of Contemporary Glass Lamps | Nova Lighting | Offers multi-colored glass torchiere feature and unique adjustable design enables to change the height of any or all three shades. Torchieres have a height that can be adjusted from 60 to 74 inches tall and width of 40 inches. | http://www.novalamps.com/ind ex2.htm |
| 750-641 DALI Interface Module | Wago | Efficiently monitors and controls building lighting. System uses 15 V dc external power supply to provide up to 400 ma of supply current capable of supporting three DALI modules. | http://www.wago.com/start/star t.htm |

| TECHNOLOGY | Manufacturer | Manufacturers Claim | CONTACT |
|-----------------------|-------------------------------|---|---------------------------------|
| | | WATER EFFICIENCY | |
| Solis Solar Faucet | Sloan | Electronic solar-powered faucet operates with ambient lighting. Conserves water and energy and integrated power plant storage cell transforms light from any source into electrical energy. Batteries provide back-up energy and can last up to 10 years. | http://www.sloanvalve.com |
| Compact HF-4 System | Koch Membrane System | Removes pathogens and turbidity from surface water. Nominal molecular weight cut-off of 100,000, capable of 4-log removal or better, for Giardia, Cryptosporidium, and viruses. Ability to remove iron and manganese, improving the color and taste of water. | http://www.kochmembrane.co m |
| | E | ENERGY MANAGEMENT TOOLS | |
| ION® EEM | Power Measurement | Designed to reduce energy-related business risks by controlling energy and operations costs, enabling better procurement strategies, and maintaining reliability | http://www.pwrm.com |
| | | MISCELLANEOUS | |
| CarbonCast | AltusGroup | Non-corrosive, high-strength carbon fiber grid reduces weight of architectural and structural components by up to 66 percent. Offers improved corrosion resistance, durability and insulation value. | http://www.altusprecast.com |
| PV Panels for Windows | RWE Group and SCHOTT Group | Semi-transparent economical and efficient thin-film silicon solar panels. Used in skylights and windows. Provides impressive amount of clean energy, reduced glare and increased shading coefficient. | http://www.rweschottsolar.com |

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APPENDIX C MEETINGS, CONFERENCES, AND OTHER EVENTS

NOTE: New events are highlighted in blue. DOE-sponsored events are highlighted in green.

FEMP Training Calendar: http://www.eere.energy.gov/femp/newsevents/events.cfm

GENERAL ANNOUNCEMENTS

| DATE | Event | Sponsor |
|--------------------------------------|--|--|
| November 30, 2004 | Motors: Operation, Efficiency and Economics | Association of Energy Engineers |
| November 30, 2004 | Realtime Energy System Integration | Association of Energy Engineers |
| January 7, 2004 | Distributed Generation Short Courses Course 2: Fuel Cells | Association of Energy Engineers |
| January 10 – February 18, 2005 | PV Design Online | Solar Energy International |
| January 10, 2004 | 3D Load Profiling Using Interval Meter Data | Association of Energy Engineers |
| January 10, 2004 | HVAC Controls Short Course: Course 1: Introduction to HVAC Controls Course 2: Advanced HVAC Control Strategies | Association of Energy Engineers |
| January 12, 2004 | Energy Auditing Fundamentals | Association of Energy Engineers |
| January 18, 2004 | Pitfalls and Profits in Performance Contracting | Association of Energy Engineers |
| January 18, 2004 | Facilities Management: Essentials & Critical Strategies for Success | Association of Energy Engineers |
| Ongoing | FEMP Lights | Department of Energy's Federal Energy Management Program |

CENTRAL

| DATE | EVENT | Sponsor |
|------------------------|--|---|
| January 20-21, 2005 | Harvesting Clean Energy V Great Falls, MT | Montana's Office of the Governor and Office of the Secretary of State, National Center for Appropriate Technology, U.S. Department of Energy and many others |
| May 10-13, 2005 | The Industrial Energy Technology Conference New Orleans, Louisiana | American Chemistry Council, Global Energy Partners, LLC and EPRI, Louisiana Department of Natural Resources, Sempra Energy Solutions, Spirax Sarco, Inc., Texas State Energy Conservation Office, and U.S. Department of Energy |
| May 15-17, 2005 | Spring Electric Energy Conference Albuquerque, NM | Rocky Mountain Electrical League |
| May 15-18, 2005 | Windpower 2005 Denver, CO | PPM Energy, Vestas America, American Corn Growers Foundation, American Corn Growers Association, Renewable Energy Systems, EnXco, Milbank, Alliant Energy and MA Mortenson Company |

MID-ATLANTIC

| DATE | EVENT | Sponsor |
|-----------------------|---|---|
| December 3-4, 2004 | 5 th Annual Green Living and Energy Expo Roanoke, VA | Association of Energy Conservation Professionals |
| December 6-7, 2004 | 3 rd Annual National Policy Conference of the American Council on Renewable Energy (ACORE) in conjunction with the Energy Efficiency and Renewable Energy Caucus of the U.S. Congress Washington, D.C. | American Council on Renewable Energy |

| DATE | EVENT | Sponsor |
|-----------------------------|--|---|
| March 23-24, 2005 | Globalcon 2005 Atlantic City, NJ | Association of Energy Engineers, Select Energy, NYSERDA, New Jersey's Clean Energy Program and others |
| March 29 – April 1, 2005 | NHA Annual Hydrogen Conference 2005 Washington, D.C. | National Hydrogen Association |
| April 10-12, 2005 | Engineering Sustainability 2005 Pittsburgh, PA | University of Pittsburgh's Mascaro Sustainability Initiative in the School of Engineering |

MIDWEST

| DATE | EVENT | Sponsor |
|-----------------------|---|--|
| February 1-2, 2005 | Better Buildings: Better Business Kalahari Resort, WI | Alliant Energy, Energy Center of Wisconsin, Focus on Energy, Wisconsin Energy Star Homes, Xcel Energy and others |
| February 2-3, 2005 | Momentum is Building Des Moines, IA | Iowa's Electric Cooperatives and Iowa Energy Center |
| February 16-17, 2005 | Midwest 2005 Building and Design Exchange Chicago, IL | Building and Design Exchange |

NORTHEAST

| DATE | EVENT | Sponsor |
|----------------------|--|--|
| March 15-17, 2005 | Building Energy 2005: The Practice of Sustainability: Art, Science, Business! Boston, MA | Northeast Sustainable Energy Association |
| April 20-22, 2005 | The TFM Show Chicago, IL | The TFM Show and the U.S. Green Building Council |
| May 4-6, 2005 | 13 th National Conference on Building Commissioning New York, NY | New York State Energy Research and Development Authority and Portland Energy Conservation Inc. |

SOUTHEAST

| DATE | EVENT | Sponsor |
|-------------------------|---|---|
| December 5- 10, 2004 | Performance of Exterior Envelopes of Whole Buildings IX International Conference Clearwater Beach, FL | Department of Energy, Oak Ridge National Laboratory, American Society of Heating, Refrigerating, and Air- Conditioning, DuPont Building Innovations, Society of Building Science Educators and others |
| June 20-23, 2005 | Ecobuild America Orlando, FL | Delphi Inc., Grupo Decosi S.A. de C.V., Specifications Consultants in Independent Practice, Building Green Inc., BNP Media, ESRI, Pella Windows & Doors, and Spiderweb Inc. |

WESTERN

| DATE | EVENT | Sponsor |
|----------------------|--|--|
| December 3, 2004 | Houses that Work Stockton, CA | Energy and Environmental Building Association |
| December 8-9, 2004 | HVAC Systems and Controls Everett, WA | Department of Energy's Federal Energy Management Program, Department of Energy Region X, Avista Utilities, Benton County PUD, Puget Sound Energy, City of Richland and many others |
| December 16, 2004 | Energy Conservation Techniques Renton, WA | Department of Energy's Federal Energy Management Program, Department of Energy Region X, Avista Utilities, Benton County PUD, Puget Sound Energy, City of Richland and many others |

| DATE | EVENT | Sponsor |
|---------------------|--|--|
| December 16, 2004 | HVAC Controls and Optimization Spokane, WA | Department of Energy's Federal Energy Management Program, Department of Energy Region X, Avista Utilities, Benton County PUD, Puget Sound Energy, City of Richland and many others |
| January 12, 2005 | Efficient Lighting Fundamentals Everett, WA | Department of Energy's Federal Energy Management Program, Department of Energy Region X, Avista Utilities, Benton County PUD, Puget Sound Energy, City of Richland and many others |
| January 26-27, 2005 | HVAC Systems and Controls Renton, WA | Department of Energy's Federal Energy Management Program, Department of Energy Region X, Avista Utilities, Benton County PUD, Puget Sound Energy, City of Richland and many others |
| February 8, 2005 | Introduction to Building Commissioning Spokane, WA | Department of Energy's Federal Energy Management Program, Department of Energy Region X, Avista Utilities, Benton County PUD, Puget Sound Energy, City of Richland and many others |
| March 1-3, 2005 | POWER-GEN Renewable Energy Las Vegas, NV | Renewable Energy Access, GE Energy, and Navigant Consulting |

| DATE | EVENT | Sponsor |
|---------------|---|--|
| March 3, 2005 | Efficient Lighting Fundamentals Renton, WA | Department of Energy's Federal Energy Management Program, Department of Energy Region X, Avista Utilities, Benton County PUD, Puget Sound Energy, City of Richland and many others |

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